PCT WORLD INTELLECTUAL PROPERTY ORGANIZATION
International Bureau

INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(51) International Patent Classification 7 : H01B 12/00 — A1

(11) International Publication Number: WO 00/39811

(43) International Publication Date: 6 July 2000 (06.07.00)

(21) International Application Number: PCT/EP99/10442

(22) International Filing Date: 22 December 1999 (22.12.99)

(30) Priority Data:
98124699.4 — 24 December 1998 (24.12.98) — EP
60/115,632 — 12 January 1999 (12.01.99) — US

(71) Applicant *(for all designated States except US)*: PIRELLI CAVI E SISTEMI S.P.A. [IT/IT]; Viale Sarca, 222, I–20126 Milano (IT).

(72) Inventors; and

(75) Inventors/Applicants *(for US only)*: NASSI, Marco [IT/IT]; Via Cibrario, 36bis, I–10100 Torino (IT). LADIE', Pierluigi [IT/IT]; Corso di Porta Ticinese, 69, I–20123 Milano (IT).

(74) Common Representative: PIRELLI CAVI E SISTEMI S.P.A.; Viale Sarca, 222, I–20126 Milano (IT).

(81) Designated States: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, ARIPO patent (GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG).

Published
With international search report.

(54) Title: ELECTRICAL POWER TRANSMISSION SYSTEM USING SUPERCONDUCTORS

(57) Abstract

In general terms, the present invention relates to an electrical power transmission system using superconductors which is compatible with conventional transmission systems. In a first aspect, the present invention relates to a method for installing in an electrical power transmission system a connection using a coaxial superconducting cable, comprising the following steps: determining the reactance of a conventional cable suitable for the said connection; installing the coaxial superconducting cable; increasing the reactance of the coaxial superconducting cable, in such a way that the reactance of the superconducting cable is substantially equal to the reactance of the conventional cable. In particular, the step of increasing the reactance of the coaxial superconducting cable comprises the step of connecting in series with the coaxial superconducting cable an inductive element, preferably made from a superconducting material.